

Amendments to the Claims:

Please cancel original claims 1-123 and 128-132 without prejudice.

Please add the following new claims 133-181.

Listing of Claims:

Claims 1-123 (Cancelled)

Claim 124 (Original) A method of synthesizing a bispecific antibody comprising the steps of:

- (i) expressing a gene having a sequence selected from the group consisting of: VH antibody 1-S-VL antibody 1-S-VL antibody 2-S-VH antibody 2; VH antibody 1-S-VL antibody 1-S-VH antibody 2-S-VL antibody 2; VL antibody 1-S-VH antibody 1-S-VL antibody 2-S-VH antibody 2; VL antibody 1-S-VH antibody 1-S-VH antibody 2-S-VL antibody 2; wherein -S- is a linker sequence; and
- (ii) isolating said bispecific antibody.

Claim 125 (Original) A method as in claim 124 wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 126 (Original) A method of synthesizing a bispecific antibody comprising the steps of:

- (i) expressing a gene having the sequence: VL antibody 1-S-VH antibody 2, and
- (ii) expressing a gene having the sequence: VH antibody 1-S-VL antibody 2,
- (iii) combining the products of steps (i) and (ii), and
- (iv) isolating said bispecific antibody, wherein -S- is a linker sequence.

Claim 127 (Original) A method of synthesizing a bispecific antibody comprising the steps of:

- (i) expressing a gene having the sequence; VL antibody 2-S-VH antibody 1,
and
- (ii) expressing a gene having the sequence: VH antibody 2-S-VL antibody 1,
- (iii) combining the products of steps (i) and (ii), and
- (iv) isolating said bispecific antibody, wherein -S- is a linker sequence.

Claims 128-132 (Cancelled)

Claim 133 (New) A method as in claim 124, wherein antibodies 1 and 2 recognize two different cell types.

Claim 134 (New) A method as in claim 126, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 135 (New) A method as in claim 126, wherein antibodies 1 and 2 recognize two different cell types.

Claim 136 (New) A method as in claim 127, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 137 (New) A method as in claim 127, wherein antibodies 1 and 2 recognize two different cell types.

Claim 138 (New) A method of synthesizing a bispecific antibody comprising the steps of:

- (i) expressing a single chain protein comprising the VH and VL regions of a first antibody (antibody 1) and the VH and VL regions of a second antibody (antibody 2) and

- (ii) isolating said bispecific antibody.

Claim 139 (New) A method as in claim 138, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 140 (New) A method as in claim 138, wherein antibodies 1 and 2 recognize two different cell types.

Claim 141 (New) A method of synthesizing a bispecific antibody comprising the steps of:

- (i) expressing a single chain protein comprising the VH region of a first antibody (antibody 1) and the VL region of a second antibody (antibody 2);
- (ii) expressing a single chain protein comprising the VL region of antibody 1 and the VH region of antibody 2;
- (iii) combining the products of steps (i) and (ii); and
- (iv) isolating said bispecific antibody.

Claim 142 (New) A method as in claim 141, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 143 (New) A method as in claim 141, wherein antibodies 1 and 2 recognize two different cell types.

Claim 144 (New) A method of synthesizing a recombinant antibody comprising the steps of:

- (i) expressing two single chain polypeptides, each of said single chain polypeptides comprising an antibody VH region and an antibody VL region;
- (ii) combining said two single chain polypeptides so that they associate; and
- (iii) isolating said recombinant antibody.

Claim 145 (New) A method as in claim 144, wherein said recombinant antibody is bispecific.

Claim 146 (New) A recombinant bispecific antibody comprising a polypeptide chain that comprises the VH and VL regions of a first antibody (antibody 1) and the VH and VL regions of a second antibody (antibody 2).

Claim 147 (New) A recombinant bispecific antibody as in claim 146, wherein said polypeptide chain has a sequence selected from the group consisting of VH antibody 1-S-VL antibody 1-S-VL antibody 2-S-VH antibody 2; VH antibody 1-S-VL antibody 1-S-VH antibody 2-S-VL antibody 2; VL antibody 1-S-VH antibody 1-S-VL antibody 2-S-VH antibody 2; and VL antibody 1-S-VH antibody 1-S-VH antibody 2-S-VL antibody 2; and wherein -S- is a linker sequence.

Claim 148 (New) A recombinant bispecific antibody as in claim 147, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 149 (New) A recombinant bispecific antibody as in claim 147, wherein antibody 2 is an antibody capable of binding to an epitope of a specific cell, and antibody 1 is a catalytic antibody.

Claim 150 (New) A recombinant bispecific antibody as in claim 147, wherein antibodies 1 and 2 recognize two different cell types.

Claim 151 (New) A vector containing a nucleic acid that encodes for a bispecific antibody as in claim 147.

Claim 152 (New) A host cell that produces a bispecific antibody as in claim 147.

Claim 153 (New) A bacteriophage containing a nucleic acid that encodes for a bispecific antibody as in claim 147.

Claim 154 (New) A recombinant bispecific antibody as in claim 146, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 155 (New) A recombinant bispecific antibody as in claim 146, wherein antibody 2 is an antibody capable of binding to an epitope of a specific cell, and antibody 1 is a catalytic antibody.

Claim 156 (New) A recombinant bispecific antibody as in claim 146, wherein antibodies 1 and 2 recognize two different cell types.

Claim 157 (New) A vector containing a nucleic acid that encodes for a bispecific antibody as in claim 146.

Claim 158 (New) A host cell that produces a bispecific antibody as in claim 146.

Claim 159 (New) A bacteriophage containing a nucleic acid that encodes for a bispecific antibody as in claim 146.

Claim 160 (New) A recombinant bispecific antibody comprising,

- (i) a first polypeptide comprising the VH region of a first antibody (antibody 1) and the VL region of a second antibody (antibody 2); and
- (ii) a second polypeptide comprising the VL region of antibody 1 and the VH region of antibody 2.

Claim 161 (New) A recombinant bispecific antibody as in claim 160, wherein said first polypeptide comprises the sequence VL antibody 1-S-VH antibody 2, said second

polypeptide comprises the sequence VH antibody 1-S-VL antibody 2, and -S- is a linker sequence.

Claim 162 (New) A recombinant bispecific antibody as in claim 161, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 163 (New) A recombinant bispecific antibody as in claim 161, wherein antibody 2 is an antibody capable of binding to an epitope of a specific cell, and antibody 1 is a catalytic antibody.

Claim 164 (New) A recombinant bispecific antibody as in claim 161, wherein antibodies 1 and 2 recognize two different cell types.

Claim 165 (New) A vector containing a nucleic acid that encodes for a bispecific antibody as in claim 161.

Claim 166 (New) A host cell that produces a bispecific antibody as in claim 161.

Claim 167 (New) A bacteriophage containing a nucleic acid that encodes for a bispecific antibody as in claim 161.

Claim 168 (New) A recombinant bispecific antibody as in claim 160, wherein antibody 1 is an antibody capable of binding to an epitope of a specific cell, and antibody 2 is a catalytic antibody.

Claim 169 (New) A recombinant bispecific antibody as in claim 160, wherein antibody 2 is an antibody capable of binding to an epitope of a specific cell, and antibody 1 is a catalytic antibody.

Claim 170 (New) A recombinant bispecific antibody as in claim 160, wherein antibodies 1 and 2 recognize two different cell types.

Claim 171 (New) A vector containing a nucleic acid that encodes for a bispecific antibody as in claim 160.

Claim 172 (New) A host cell that produces a bispecific antibody as in claim 160.

Claim 173 (New) A bacteriophage containing a nucleic acid that encodes for a bispecific antibody as in claim 160.

Claim 174 (New) A recombinant antibody comprising two single chain polypeptides, each of said single chain polypeptides comprising an antibody VH region and an antibody VL region.

Claim 175 (New) The recombinant antibody of claim 174, wherein said recombinant antibody is bispecific.

Claim 176 (New) A polypeptide comprising one antibody VH region, said VH region sequence taken from a first antibody (antibody 1) and one antibody VL region, said VL region sequence taken from a second antibody (antibody 2).

Claim 177 (New) A polypeptide as in claim 176, wherein said polypeptide has a sequence selected from the group consisting of VL antibody 2-S-VH antibody 1 and VH antibody 1-S-VL antibody 2, and -S- is a linker sequence.

Claim 178 (New) A gene that encodes a polypeptide chain that comprises the VH and VL regions of a first antibody (antibody 1) and the VH and VL regions of a second antibody (antibody 2).

Claim 179 (New) A gene as in claim 178, wherein said polypeptide chain has a sequence selected from the group consisting of VH antibody 1-S-VL antibody 1-S-VL antibody 2-S-VH antibody 2; VH antibody 1-S-VL antibody 1-S-VH antibody 2-S-VL antibody 2; VL antibody 1-S-VH antibody 1-S-VL antibody 2-S-VH antibody 2; and VL antibody 1-

S-VH antibody 1-S-VH antibody 2-S-VL antibody 2; and wherein -S- is a linker sequence.

Claim 180 (New) A gene that encodes a polypeptide chain that comprises one antibody VH region, said VH region sequence taken from a first antibody (antibody 1) and one VL region, said VL region sequence taken from a second antibody (antibody 2).

Claim 181 (New) A gene as in claim 180, wherein said polypeptide comprises a sequence selected from the group consisting of VL antibody 2-S-VH antibody 1 and VH antibody 1-S-VL antibody 2, and -S- is a linker sequence.